

REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 1-21 were pending. Claims 1-21 were rejected. Portions of the specification and drawings were objected.

In this response, no claim has been canceled. Claims 1, 4, 7, 10-11, and 14-19 have been amended. New claims 22-31 have been added. Thus, claims 1-31 remain pending. In addition, portions of the specification and drawings have been amended. Formal drawings will be submitted when the present application is in condition of allowance. No new matter has been added.

Claims 16-17 are objected to because of the informalities. Claims 10-21 are rejected under 35 U.S.C. 112, first paragraph. Claims 16-17 are rejected under 35 U.S.C. 112, second paragraph. In view of the foregoing amendments, it is respectfully submitted that the rejections and objections have been overcome.

Claims 1, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by UK Patent Application Number GB 2303030 by Zandi et al ("Zandi"). Claims 1, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by being anticipated by U.S. Patent Number 5,966,465 by Keith et al ("Keith").

It is respectfully submitted that claims 1, 4, and 7 as amend include limitations that are not disclosed by Zandi or Keith. Specifically, independent claim 1 recites as follows:

1. A method comprising:
applying an inverse wavelet transform to data repeatedly for a plurality of decomposition levels during quantization of wavelet coefficients that is performed using a plurality of stages including one or more intermediate stages and a final stage; and
for each of the plurality of decomposition levels, clipping, after each application of the inverse wavelet transform during the one or more intermediate stages prior to the final stage, any value generated as a result of application of the inverse wavelet transform that exceeds a predetermined range associated with that decomposition level subband of the inverse wavelet transform.

(Emphasis added)

Independent claim 1 includes limitations that for each decomposition level, after each application of an inverse wavelet transform during the one or more intermediate stages prior to the

final stage, any value generated as a result of application of the inverse wavelet transform that exceeds a predetermined range associated with that decomposition level subband of the inverse wavelet transform. It is respectfully submitted that the above limitations are absent from the cited references.

Rather, Zandi merely discloses performing the clipping operations at the final output (see, Fig. 17 of Zandi), while Keith merely discloses clipping in general (see, col. 14, lines 30-46 of Keith). In contrast, the present invention as claimed includes performing the clipping operations for each transform of each decomposition level during intermediate stages without having to wait for the final output, where the clipping ranges are determined based on the respective decomposition level (e.g., each level having a specific range which may be different). It is respectfully submitted that none of the cited references, individually or in combination, discloses or suggests the above limitations. Therefore, for the reasons discussed above, it is respectfully submitted that independent claim 1 is not anticipated by Zandi or Keith.

Similarly, independent claims 4 and 7 include limitations similar to those recited in claim 1. Thus, for the reasons similar to those discussed above, independent claims 4 and 7 are not anticipated by Zandi or Keith.

Given that dependent claims 2-3, 5-6, 8-9, and 22-30 depend from one of the above independent claims, at least for the reasons similar to those discussed above, it is respectfully submitted that claims 2-3, 5-6, 8-9, and 22-30 are not anticipated by the cited references. Withdrawal of the rejections is respectfully requested.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JPEG2000 N1646 ("JPEG2000") in view of Keith. It is respectfully submitted that none of the cited references, individually or in combination, teaches the above limitations recited in claim 7. Therefore, at least for the reasons discussed above, it is respectfully submitted that claim 7 is patentable over the cited references. Given that claims 8-9 and 28-30 depend from claim 7, it is respectfully submitted that

claims 8-9 and 28-30 are patentable over the cited references. Withdrawal of the rejections is respectfully requested.

Claims 10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JPEG2000 in view of U.S. Patent Number 6,088,062 by Kanou et al. ("Kanou") and U.S. Patent Number 6,236,765 by Acharya ("Acharya"). It is respectfully submitted that claims 10-21 and 31 include limitations that are not disclosed or suggested by the cited references, individually or in combination. Specifically, independent claim 10 recites as follows:

10. A method comprising:
 - applying a forward wavelet transform to input data in a 4:x:x format to generate encoded data, where x is not equal to 4; and
 - quantizing level 1 coefficients in high-low (HL) and high-high (HH) subbands to zero for chrominance components without changing a luminance component of the input data, the quantized level 1 coefficients in HL and HH subbands having zero values being used to construct samples of the chrominance components to have a substantially identical format as the luminance component when generating the encoded data, such that the encoded data resembles 4:4:4 formatted data.

(Emphasis added)

Independent claim 10 includes limitations quantizing level 1 coefficients in high-low (HL) and high-high (HH) subbands to zero for chrominance components without changing a luminance component of the input data having a format other than a 4:4:4 format, where the quantized level 1 coefficients in HL and HH subbands having zero values are used to construct samples of the chrominance components to have a substantially identical format as the luminance component for the output data that resembles a 4:4:4 format. It is respectfully submitted that the above limitations are absent from the cited references, individually or in combination.

Although Kanou discloses a 4:4:4 format and Acharya discloses assigning zero values to LH, HL, and HH coefficients, none of the cited references discloses or suggests converting a non-4:4:4 format into a 4:4:4 format to allow a decoder to handle non-4:4:4 format data as if it is handling a 4:4:4 format data. Specifically, none of the cited references, individually or in combination, discloses or suggests quantizing the coefficients for chrominance components only without affecting the luminance component, in order to resemble a format other than a 4:4:4 format to a 4:4:4 format.

Therefore, for the reasons discussed above, it is respectfully submitted that independent claim 10 is patentable over the cited references.

Similarly, independent claims 14, 18, and 31 include limitations similar to those recited in claim 10. Thus, for the reasons similar to those discussed above, independent claims 14, 18, and 31 are patentable over the cited references.

Given that dependent claims 11-13, 15-17, and 19-21 depend from one of the above independent claims, at least for the reasons similar to those discussed above, it is respectfully submitted that claims 11-13, 15-17, and 19-21 are patentable over the cited references. Withdrawal of the rejections is respectfully submitted.

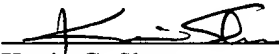
In view of the foregoing, Applicant respectfully submits the present application is now in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,

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